

Listing of the Claims:

The following is a complete listing of all the claims in the application, with an indication of the status of each:

Claims 1-12 (Canceled).

- 1 Claim 13 (New). A computer implemented method for creating or
2 manipulating one or more drawings or sets of formatted data representing a
3 physical environment, comprising the steps of:
- 4 a) using a computer for creating, formatting, editing or
5 manipulating one or more objects defining an environment in which an in-
6 building or campus communications network may be deployed, said
7 environment having one or more of floors, walls, partitions, buildings,
8 building complexes or compounds, terrain, foliage, or other sites or
9 obstructions;
 - 10 b) grouping a number of said one or more objects into at least one
11 editable layer;
 - 12 c) verifying, using a computer, the sufficiency of said one or more
13 objects to ensure a useful definition of said environment and notifying a
14 user of results of said verification of sufficiency;
 - 15 d) generating at least one formatted drawing or at least one set of
16 formatted data containing computer representations of said one or more
17 objects in a form transportable to and usable by a communications
18 engineering or network management application; and
19 e) rendering a three-dimensional view of said environment.
- 1 Claim 14 (New). The method of claim 13 further comprising the step of
2 adding or editing at least one object in said at least one editable layer or in
3 said at least one formatted drawing or in at least one set of formatted data.

1 Claim 15 (New). The method of claim 13 further comprising the step of
2 moving at least one object in said at least one one editable layer or in said
3 at least one formatted drawing or in at least one set of formatted data.

1 Claim 16 (New). The method of claim 13 further comprising the step of
2 modifying at least one object in said at least one editable layer or in said at
3 least one formatted drawing or in at least one set of formatted data.

1 Claim 17 (New). The method of claim 13 wherein said step of a) includes
2 the step of removing extraneous objects from said one or more objects or
3 from said at least one formatted drawing or in at least one set of formatted
4 data.

1 Claim 18 (New). The method of claim 13 wherein said step a) includes
2 the step of tracing and adding a traced object to said one or more objects or
3 more objects or from said at least one formatted drawing or in at least one
4 set of formatted data.

1 Claim 19 (New) The method of claim 13 wherein said step a) includes the
2 step of modifying one or more objects or one of electrical properties,
3 physical properties, aesthetic properties, or spatial configurations of one or
4 more objects.

1 Claim 20 (New). The method of claim 13 wherein said notifying
2 performed in said verifying and notifying step is performed in an automatic
3 fashion without feedback being provided to the user.

1 Claim 21 (New). The method of claim 13 wherein said notifying
2 performed in said verifying and notifying step is performed by prompting
3 the user and, when required to provide said useful definition, requires the

4 user to correct any insufficiencies in response to an insufficiency
5 notification.

1 Claim 22 (New). The method of claim 13 wherein said communications
2 engineering or network management application is selected from the group
3 consisting of wireless propagation models, measurement tools, component
4 placement or layout visualization tools, optimization tools, bill of materials
5 generating tools, asset management tools, and network performance
6 management or prediction tools.

1 Claim 23 (New). The method of claim 13 further comprising the step of
2 scaling at least part of said at least one formatted drawing or said at least
3 one set of formatted data or at least one object of said one or more objects.

1 Claim 24 (New). The method of claim 13 further comprising the step of
2 adding measurement data to said at least one of said one or more objects or
3 said at least one formatted drawing or said at least one set of formatted
4 data.

1 Claim 25 (New). The method of claim 13 further comprising the step of
2 specifying or invoking a propagation model for performing predictions of
3 performance.

1 Claim 26 (New). The method of claim 13 further comprising the step of
2 specifying or invoking a listing of communications equipment.

1 Claim 27 (New). An apparatus for creating or manipulating one or more
2 drawings or sets of formatted data representing a physical environment,
3 comprising:

4 computer implemented means for creating, formatting, editing or
5 manipulating one or more objects defining an environment in which an in-
6 building or campus communications network may be deployed, said
7 environment having one or more of floors, walls, partitions, buildings,
8 building complexes or compounds, terrain, foliage or other sites or
9 obstructions;

10 means for grouping a number of objects into at least one editable
11 layer;

12 means for verifying, using a computer, the sufficiency of said one
13 or more objects to ensure a useful definition of said environment and
14 notifying a user of results of said verification of sufficiency;

15 means for generating at least one formatted drawing or at least one
16 set of formatted data containing computer representations of said one or
17 more objects in a form transportable to and usable by a communications
18 engineering or network management application; and

19 means for rendering a three dimensional view of said environment.

1 Claim 28 (New). The apparatus of claim 27 further comprising a means
2 for adding or editing at least one object in said at least one editable layer or
3 in said at least one formatted drawing or said at least one set of formatted
4 data.

1 Claim 29 (New). The apparatus of claim 27 further comprising a means
2 for moving at least one object in said at least one editable layer or in said at
3 least one formatted drawing or said at least one set of formatted data.

1 Claim 30 (New). The apparatus of claim 27 further comprising a means
2 for modifying an object in said at least one editable layer or in said at least
3 one formatted drawing or said at least one set of formatted data in said one
4 layer of grouped objects.

1 Claim 31 (New). The apparatus of claim 27 further comprising a means
2 for removing extraneous objects from said one or more objects or from
3 said at least one formatted drawing or in at least one set of formatted data.

1 Claim 32 (New). The apparatus of claim 27 further comprising a means
2 for tracing and a means for adding a traced object to said one or more
3 objects or to said at least one formatted drawing or in at least one set of
4 formatted data.

1 Claim 33 (New). The apparatus of claim 27 further comprising a means
2 for modifying one or more objects or one or more of electrical properties,
3 physical properties, aesthetic properties, and spatial configurations of one
4 or more objects.

1 Claim 34 (New). The apparatus of claim 27 wherein notifying performed
2 by said means for verifying and notifying is performed in an automatic
3 fashion without feedback being provided to the user.

1 Claim 35 (New). The apparatus of claim 27 wherein notifying performed
2 by said means for verifying and notifying is performed by prompting the
3 user and, when required to provide said useful definition, requires the user
4 to correct any insufficiencies in response to an insufficiency notification.

1 Claim 36 (New). The apparatus of claim 27 wherein said communications
2 engineering or network management application is selected from the group
3 consisting of wireless propagation models, measurement tools, component
4 placement or layout visualization tools, optimization tools, bill of materials
5 generating tools, asset management tools, and network performance
6 management or prediction tools.

1 Claim 37 (New). The apparatus of claim 27 further comprising a means
2 for scaling at least part of said at least one formatted drawing or said at
3 least one set of formatted data or at least one object of said one or more
4 objects.

1 Claim 38 (New). The apparatus of claim 27 further comprising a means
2 for adding measurement data to at least one of said one or more objects
3 or said at least one formatted drawing or said at least one set of formatted
4 data.

1 Claim 39 (New). The apparatus of claim 27 further comprising means for
2 specifying or invoking a propagation model for performing predictions of
3 performance.

1 Claim 40 (New). The apparatus of claim 27 further comprising a means
2 for specifying or invoking a listing of communications equipment.